

Professional Development and Teacher Change

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ABSTRACT *This article describes a model of teacher change originally presented nearly two decades ago (Guskey, 1986) that began my long and warm friendship with Michael Huberman. The model portrays the temporal sequence of events from professional development experiences to enduring change in teachers' attitudes and perceptions. Research evidence supporting the model is summarized and the conditions under which change might be facilitated are described. The development and presentation of this model initiated a series of professional collaborations between Michael and myself, and led to the development of our co-edited book, Professional Development in Education: new paradigms and practices (Guskey & Huberman, 1995), which was named 'Book of the Year' by the National Staff Development Council in 1996.*

Introduction

High-quality professional development is a central component in nearly every modern proposal for improving education. Policy-makers increasingly recognize that schools can be no better than the teachers and administrators who work within them. While these proposed professional development programs vary widely in their content and format, most share a common purpose: to 'alter the professional practices, beliefs, and understanding of school persons toward an articulated end' (Griffin, 1983, p. 2). In most cases, that end is the improvement of student learning. Professional development programs are systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students.

This article presents a perspective on the nature of these three areas of change and the conditions under which they take place. It examines the order of occurrence of change events and how specific types of change might be facilitated and sustained. It proposes a model for viewing change in teachers in the hope of clarifying aspects of that change process. In addition, the implications of this model for the practice of professional development are considered in light of current research.

Historical Context

Despite the general acceptance of professional development as essential to improvement in education, reviews of professional development research consist-

ently point out the ineffectiveness of most programs (see Cohen & Hill, 1998, 2000; Kennedy, 1998; Wang *et al.*, 1999). A variety of factors undoubtedly contribute to this ineffectiveness. It has been suggested, however, that the majority of programs fail because they do not take into account two crucial factors: (1) what motivates teachers to engage in professional development, and (2) the process by which change in teachers typically occurs (Guskey, 1986).

Although teachers are generally required to take part in professional development by certification or contractual agreements, most report that they engage in these activities because they want to become better teachers. They see professional development programs as among the most promising and most readily available routes to growth on the job (Fullan, 1991, 1993)—not only as a way to combat boredom and alienation, but also as a pathway to increased competence and greater professional satisfaction (Huberman, 1995).

It is important to note that, for the vast majority of teachers, becoming a better teacher means enhancing student learning outcomes. In an early study of teachers' perceptions of success, for example, Harootunian & Yargar (1980) found that, 'regardless of teaching level, most teachers define their success in terms of their pupils' behaviors and activities, rather than in terms of themselves or other criteria' (p. 4). Other researchers since report similar findings (for example, Fullan, 1999; Fullan & Hargreaves, 1996).

What attracts teachers to professional development, therefore, is their belief that it will expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students. But teachers also tend to be quite pragmatic. What they hope to gain through professional development are specific, concrete, and practical ideas that directly relate to the day-to-day operation of their classrooms (Fullan & Miles, 1992). Development programs that fail to address these needs are unlikely to succeed.

A second important factor that many professional development programs fail to consider is the process of teacher change. Professional development activities frequently are designed to initiate change in teachers' attitudes, beliefs, and perceptions. Professional development leaders, for example, often attempt to change teachers' beliefs about certain aspects of teaching or the desirability of a particular curriculum or instructional innovation. They presume that such changes in teachers' attitudes and beliefs will lead to specific changes in their classroom behaviors and practices, which in turn will result in improved student learning.

This perspective on teacher change evolved largely from a model developed by early change theorists such as Lewin (1935), who derived many of his ideas about affecting change from psychotherapeutic models. More recent research on teacher change indicates, however, that the assumptions of this model may be inaccurate when considering professional development programs for experienced teachers (Huberman & Crandall, 1983; Huberman & Miles, 1984; Guskey & Huberman, 1995). An alternative model that re-examines the process of teacher change is needed to guide the creation of more effective professional development programs.

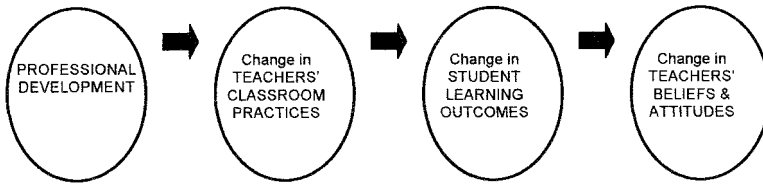


FIG. 1. A model of teacher change.

An Alternative Model

As stated earlier, the three major goals of professional development programs are change in the classroom practices of teachers, change in their attitudes and beliefs, and change in the learning outcomes of students. Of particular importance to efforts to facilitate change, however, is the sequence in which these outcomes most frequently occur.

The relationship among these outcomes is detailed and highly complex, and numerous factors can snarl the change process (Fullan, 1991; Guskey & Sparks, 1996). Still, professional development programs are deliberate and purposeful endeavors, and the changes a professional development leader wishes to bring about can usually be well defined (Griffin, 1983). Although the relationship among desired outcomes is reciprocal to some degree, efforts to facilitate change can and should consider the order of outcomes most likely to result in desired change and the endurance of that change (see Guskey, 2000).

Professional development programs based on the assumption that change in attitudes and beliefs comes first are typically designed to gain acceptance, commitment, and enthusiasm from teachers and school administrators before the implementation of new practices or strategies. They involve teachers in planning sessions and conduct need surveys to ensure that the new practices or strategies are well aligned with what teachers want (Joyce *et al.*, 1976). But, as important as these procedures are, they seldom change attitudes significantly or elicit strong commitment from teachers (Jones & Hayes, 1980).

The 'Model of Teacher Change' shown in Fig. 1 presents an alternative approach. This model suggests a different sequence among the three major outcomes of professional development. According to the model, significant change in teachers' attitudes and beliefs occurs primarily after they gain evidence of improvements in student learning. These improvements typically result from changes teachers have made in their classroom practices—a new instructional approach, the use of new materials or curricula, or simply a modification in teaching procedures or classroom format.

The crucial point is that it is not the professional development *per se*, but the experience of successful implementation that changes teachers' attitudes and beliefs. They believe it works because they have seen it work, and that experience shapes their attitudes and beliefs. Thus, according to the model, the key element

in significant change in teachers' attitudes and beliefs is clear evidence of improvement in the learning outcomes of their students (Guskey, 1985, 1986, 1989).

This model of change is predicated on the idea that change is primarily an experientially based learning process for teachers. Practices that are found to work—that is, those that teachers find useful in helping students attain desired learning outcomes—are retained and repeated. Those that do not work or yield no tangible evidence of success are generally abandoned. Demonstrable results in terms of student learning outcomes are the key to the endurance of any change in instructional practice.

Attitudes and beliefs about teaching in general are also largely derived from classroom experience. Teachers who have been consistently unsuccessful in helping students from educationally disadvantaged backgrounds to attain a high standard of learning, for example, are likely to believe these students are incapable of academic excellence. If, however, those teachers try a new instructional strategy and succeed in helping such students learn, their beliefs are likely to change. Again, the point is that evidence of improvement or positive change in the learning outcomes of students generally precedes, and may be a pre-requisite to, significant change in the attitudes and beliefs of most teachers.

Learning outcomes are broadly construed in the model to include not only cognitive and achievement indices, but also the wide range of student behavior and attitudes. They can include students' scores on teacher-made quizzes and examinations, as well as results from standardized assessments and achievement tests. But they can also include students' attendance, their involvement in class sessions, their classroom behavior, their motivation for learning, and their attitudes toward school, the class, and themselves. In other words, learning outcomes include whatever kinds of evidence teachers use to judge the effectiveness of their teaching.

Support for the Model

Support for this Model of Teacher Change comes from many sources. Ethnographic studies of teacher change show, for instance, that new ideas and principles about teaching are believed to be true by teachers 'when they give rise to actions that work' (Bolster, 1983, p. 298). This research demonstrates that experienced teachers seldom become committed to a new instructional approach or innovation until they have seen it work in their classrooms with their students.

The Study of Dissemination Efforts Supporting School Improvements (Crandall *et al.*, 1982) offers additional support. This study examined efforts to implement 61 innovative practices in schools and classrooms in 146 districts nationwide. Of particular interest to Crandall and his associates was the development of teachers' commitment to the new practices. In several instances, they found project managers tried to stimulate teachers' commitment to the new practices by involving them in problem-solving and decision-making prior to implementation. But, in most cases, this was discovered to have deleterious effects. The new practices

typically lost their effectiveness because they were altered by teachers beyond recognition.

In successful improvement efforts, on the contrary, teacher commitment was found to develop primarily after implementation took place. That is, teachers became committed to the new practices only after they had actively engaged in using them in their classrooms (Crandall, 1983). Again, this supports the idea that change in teachers' attitudes takes place primarily after some change in student learning has been evidenced.

Another example is Huberman's (1981) case study of one school district's efforts to implement the Exemplary Center for Reading Instruction (ECRI) program. According to Huberman, the first six months of program implementation were characterized by high anxiety and confusion among most teachers. Then came a period in which anxiety was reduced but teachers continued to have problems relating specific teaching behaviors to the underlying rationale of the new program. After six more months, the majority of teachers had cognitively mastered the individual pieces of ECRI, but still had 'little sense of integration of separate parts or, more globally, why certain skills or exercises are related to specific outcomes. Concern for understanding the structure and rationale of the program grew as behavioral mastery over its parts was achieved' (Huberman, 1981, p. 91). Thus, as Fullan (1985) notes in his summary of this study, changes in attitudes, beliefs, and understanding generally followed, rather than preceded, changes in behavior.

Still further support comes from studies of the separate effects of professional development and the use of new instructional practices on teachers' attitudes and beliefs (Guskey, 1979, 1982; Huberman & Miles, 1984). One particular investigation (Guskey, 1984) involved a large-scale professional development effort that focused on the implementation of mastery learning (Bloom, 1968; Guskey, 1997). Following initial training, most of the participating teachers used the mastery learning procedures in their classes and saw improvements in student learning. A few teachers, however, used the new procedures but noted no improvements. Several others took part in the training but never tried the procedures in their classes.

Results from affective measures showed that teachers who saw improvements liked teaching more and believed they had a more powerful influence on student learning outcomes. Similar changes did not occur among teachers who used the new procedures but saw no improvements in student learning, or among those who took part in the training but never attempted implementation. Thus, neither training alone nor training followed by implementation was sufficient for affective change. These particular attitude and belief changes occurred only when training and implementation were combined with evidence of improved student learning.

In some ways, this Model of Teacher Change overly simplifies a highly complex process, and exceptions to the model certainly exist. For example, participants' attitudes must at least change from 'cynical' to 'skeptical' for any change in practice to occur. Furthermore, the process of teacher change is probably more cyclical than linear (Huberman, 1992, 1995). In other words, changes in attitudes

and beliefs are likely to spur additional changes in practice that bring further change in student learning, and so on (Huberman, 1983, 1985). Still, the consistency of the results from diverse studies makes a strong case for the proposed model.

A Similar Model

Striking similarity exists between the sequence of change events suggested by this model and a change model proposed over 100 years ago to describe the temporal relationship between emotion and behavioral response. The psychologist William James (1890) theorized that the important factor in an emotion is feedback from the bodily changes that occur in response to a particular situation. His theory seemed to conflict with commonly held notions about emotion and human behavior. Simply stated, James suggested that we see a bear and run, therefore we are afraid. Or, if we slip while descending a staircase, we grab for the railing first, and then sense the fear of our near fall. This theory was also proposed by the Danish physiologist Carl Lange and is generally known as the James–Lange theory.

Similarly, the Model of Teacher Change outlined here might seem to conflict with commonly held notions about the nature of educational change. The model implies that change in teachers' attitudes and beliefs is primarily a result, rather than a cause, of change in the learning outcomes of students. In the absence of evidence of positive change in students' learning, it suggests that significant change in the attitudes and beliefs of teachers is unlikely.

Implications for Professional Development

Assuming that this Model of Teacher Change is accurate, what are its implications for professional development? The following three principles stem from the model. Consideration of these principles is believed to be essential in planning effective professional development programs that result in significant and sustained educational improvements.

Recognize that Change is a Gradual and Difficult Process for Teachers

Learning to be proficient at something new and finding meaning in a new way of doing things requires both time and effort. Any change that holds great promise for increasing teachers' competence and enhancing student learning is likely to require extra work, especially at first. The requirements of extra energy and time can significantly add to teachers' workload, even when release time is provided.

Furthermore, change brings a certain amount of anxiety and can be very threatening. Like practitioners in many other fields, teachers are reluctant to adopt new practices or procedures unless they feel sure they can make them work (Lortie, 1975). To change or to try something new means to risk failure. Not only would this be highly embarrassing, but it also runs counter to most teachers'

strong commitment to student learning. To change means to chance the possibility that students might learn less well than they do under current practices. Therefore, even when presented with evidence from the most carefully designed experimental studies, teachers do not easily alter or discard the practices they have developed and refined in the demanding environment of their own classrooms (Bolster, 1983).

It is also important to recognize that no new program or innovation will be implemented uniformly. Teaching and learning are influenced by a multitude of situational and contextual variables (Huberman & Miles, 1984; Fullan, 1985; Firestone & Corbett, 1987). Reforms based on assumptions of uniformity in the educational system repeatedly fail (Elmore & McLaughlin, 1988). Hence, an appropriate balance must be struck between program fidelity and mutual adaptation considerations (Griffin & Barnes, 1984). Close collaboration between program developers/researchers and teachers can greatly facilitate this process and can be accomplished in a variety of ways (Ward & Tikinoff, 1982).

Ensure that Teachers Receive Regular Feedback on Student Learning Progress

If the use of new practices is to be sustained and changes are to endure, the individuals involved need to receive regular feedback on the effects of their efforts. It is well known that successful actions are reinforcing and likely to be repeated while those that are unsuccessful tend to be diminished. Similarly, practices that are new and unfamiliar will be accepted and retained when they are perceived as increasing one's competence and effectiveness. This is especially true of teachers, whose primary psychic rewards come from feeling certain about their capacity to affect student growth and development (Bredeson *et al.*, 1983; Guskey, 1989; Huberman, 1992). New practices are likely to be abandoned, however, in the absence of any evidence of their positive effects. Hence, specific procedures to provide feedback on results are essential to the success of any professional development effort.

In programs involving the implementation of mastery learning, for example, teachers receive this type of feedback through the regular administration of 'formative assessments' (Bloom *et al.*, 1981). These assessments are used in mastery learning primarily to give students detailed information on their learning progress. They are paired with corrective activities designed to help students remedy their learning errors.

In addition to the feedback formative assessments offer students, however, they also offer teachers specific feedback on the effectiveness of their use of the mastery learning process. They provide teachers with direct evidence of the results of their efforts and illustrate precisely the improvements made in students' learning. Formative assessments can also be used to guide instructional revisions, when necessary, to increase teacher effectiveness (Guskey, 1997).

Students' scores on quizzes and class assessment are not the only type of feedback indicative of successful learning outcomes. Stallings (1980) found that providing teachers with regular feedback on student involvement during class

sessions could be very powerful in facilitating their use of new instructional practices. Giving teachers evidence on students' feelings of confidence or self-worth can also serve this purpose (Dolan, 1980). Whatever the student learning outcome considered, it is vitally important to include some procedure by which teachers can receive regular feedback on that outcome to assess the effects of their efforts. When teachers gain this evidence and see that a new program or innovation works well in their classrooms, change in their attitudes and beliefs can and will follow.

Provide Continued Follow-Up, Support and Pressure

If change in teachers' attitudes and beliefs occurred primarily before implementation of a new program or innovation, the quality of the initial training would be crucial. But since, as the model suggests, such change occurs mainly after implementation takes place and there is evidence of improved student learning, continued follow-up, support, and pressure following the initial training that is even more crucial.

Support coupled with pressure is essential for continuing educational improvement. Support allows those engaged in the difficult process of implementation to tolerate the anxiety of occasional failures. Pressure is often necessary to initiate change among those whose self-impetus for change is not great (Airasian, 1987; Huberman & Crandall, 1983), and it provides the encouragement, motivation, and occasional nudging that many practitioners require to persist in the challenging tasks that are intrinsic to all change efforts.

If a new program or innovation is to be implemented well, it must become a natural part of teachers' repertoire of teaching skills. Especially for program continuation and expansion, teachers must come to use the new practices almost out of habit. If this is to occur, continued follow-up and support are essential.

Of all aspects of professional development, sustaining change is perhaps the most neglected. It is clear that, to be successful, professional development must be seen as a process, not an event (Loucks-Horsley *et al.*, 1987, 1998). Learning to be proficient at something new or finding meaning in a new way of doing things is difficult and sometimes painful. Furthermore, any change that holds great promise for increasing individuals' competence or enhancing an organization's effectiveness is likely to be slow and require extra work (Huberman & Miles, 1984). It is imperative, therefore, that improvement be seen as a continuous and ongoing endeavor (McLaughlin & Marsh, 1978).

Future Research

The model of teacher change outlined in this article presents a variety of opportunities for future research. In particular, it will hopefully stimulate renewed interest in the various components of the change process, the nature of the relationship between components, and the transition from one component to the next.

For example, we need to find more creative ways to help teachers translate new knowledge into practice, keeping in mind the problems related to 'working on' rather than 'working with' teachers (Ward & Tikinoff, 1976). We need better and more efficient methods of providing teachers with regular feedback on the learning progress of their students. We need to explore the specific teacher attitudes and beliefs most crucial to professional growth and development, and to find better ways of measuring these variables. Studies on these issues offer exciting possibilities. The findings are likely to have implications for professional development efforts at all levels of education.

The model discussed offers a very optimistic perspective on the potential of professional development. It illustrates that, although the process of teacher change through professional development is complex, it is not haphazard. Careful attention to the order of change events described in this model is likely not only to facilitate change-making, but also to contribute to the endurance of change. As a result, professional development programs will be far more effective and much more powerful.

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